

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES



Application of:

Lee WEI-CHIA et al.

Examiner: John F. MORTELL

For: A DEVICE FOR DRIVING ASSISTANCE
 IN PARTICULAR FOR PARKING A
 VEHICLE

Filed: January 6, 2006

Art Unit: 2612

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REPLY BRIEF PURSUANT TO 37 C.F.R. § 41.41

SIR:

Appellant submits the present Reply Brief (the two-month response date for which is July 26, 2010 (since July 25, 2010 is a Sunday) in response to the Examiner's Answer dated May 25, 2010 ("the Answer").

It is respectfully submitted that the final rejections of claims 10 to 30 should be reversed, and these claims should be allowed for the reasons explained herein.

Finally, the Office is again encouraged to contact the undersigned if there are any questions as to any matters.

ARGUMENT

A. THE ANTICIPATION REJECTIONS OF CLAIMS 10 TO 13, 15, 16, 19, 20, AND 28

Claims 10 to 13, 15, 16, 19, 20, and 28 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application No. 2003/0058337 A1 (“Tanaka”).

To reject a claim under 35 U.S.C. § 102, the Office must demonstrate that each and every claim feature is identically described or contained in a single prior art reference. (*See Scripps Clinic & Research Foundation v. Genentech, Inc.*, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991)). Still further, not only must each of the claim features be identically described, an anticipatory reference must also enable a person having ordinary skill in the art to practice the claimed invention, namely the claimed subject matter of the claims, as discussed herein. (*See Akzo, N.V. v. U.S.I.T.C.*, 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986)).

As further regards the anticipation rejections, to the extent that the Answer and the Final Office Action may be relying on the inherency doctrine, it is respectfully submitted that to rely on inherency, the Office must provide a “basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics *necessarily* flows from the teachings of the applied art.” (*See* M.P.E.P. § 2112; emphasis in original; and *see Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Int’f. 1990)).

Thus, the M.P.E.P. and the case law make clear that simply because a certain result or characteristic may occur in the prior art does not establish the inherency of that result or characteristic. Accordingly, it is respectfully submitted that any anticipation rejection premised on the inherency doctrine is not sustainable absent the foregoing conditions.

CLAIM 10

As previously explained, independent claim 10 is to a device for providing driving assistance *in which the parallel parking driving instructions provide a driver with a driving zone situated between two trajectories which are calculated in such a way that the vehicle can be moved within the driving zone.* The specification of the present application clearly distinguishes between pilot lines and a driving zone. For example, it specifically discloses that a “driver attempts to follow these pilot lines as accurately as possible.” (*Specification*, page 1, lines 23 to 24.) Thus, for pilot lines, a driver is instructed to follow a particular trajectory. Following such a particular trajectory may lead to detrimental results, as explained in the specification.

In contrast, in a driving zone, instead of a particular trajectory which the driver is supposed to follow, a driver may “arbitrarily drive and steer and thus select any trajectory between the two delimiting trajectories without colliding with an obstacle.” (Id. at page 2, lines 13 to 16 (emphasis added)). The specification further discloses that to “remain in a safe zone, however, the driver may not leave the zone delimited by the trajectories.” (Id. at lines 17 to 19 (emphasis added)). Furthermore, the meaning of the term trajectory is clearly defined in the Specification (at pg. 7, line 28 to pg. 8, line 10) as indicating the vehicle’s travel path -- which is described by the path along which the center of the vehicle’s rear axle is guided during a move along the trajectory. In addition, a travel path of the vehicle may also be defined via other, fixed points of the vehicle, e.g., at the corners of the vehicle contour or at the position of the wheels.

Therefore, claim 10 includes the feature of *providing a driver with a driving zone situated between two paths along which a fixed point of the vehicle is guided during a move which are calculated in such a way that the vehicle can be moved within the driving zone.*

In Fig. 2 of the present application, for example, the driving zone is defined by the two trajectories (27, 28) along which the center of the rear axle (40) of vehicle (20) can safely travel. Dashed lines (44, 45) delimit an area occupied by the vehicle during travel, in which an area lateral to vehicle (20) is not exceeded during travel along both trajectories. These lines clearly do not constitute trajectories as defined in the presently claimed subject matter, since they do not describe two paths along which a fixed point of the vehicle can move safely for parking. This is clear because any single fixed point of the vehicle that could safely move along the path described by dashed line (44) could not also move safely along the path described by dashed line (45) because the two lines (44, 45) are too far apart from each other in comparison to the distance between the two acceptable trajectories (27, 28).

The Tanaka reference does not identically disclose (nor even suggest) the above-identified claim features, as provided for in the context of the claimed subject matter. It is believed and respectfully submitted that any review of the cited sections relied upon by the Answer and the Office Actions to date (or even the entire Tanaka reference) make plain that there is not even a discussion of a driving zone delimited by trajectories, as provided for in the context of the presently claimed subject matter. Instead, the Tanaka reference merely refers to “R” as “an anticipated course of the one’s own vehicle” and not a driving zone situated between two paths along which a fixed point of the vehicle is guided during a move. (Tanaka, page 4, paragraph [0054]). Also, parking path S is only referred to by Tanaka as a single “parking path.” (Tanaka, page 4, paragraph [0057]).

Thus, even if the Tanaka reference did refer to a driver's anticipated course or parking path, the Tanaka reference does not identically disclose (nor even suggest) the feature of a ***driving zone delimited by two paths along which a fixed point of the vehicle can be guided during a move*** and outside of which the vehicle may collide, as provided for in the context of the presently claimed subject matter.

In this regard, Tanaka refers to a system that calculates a singular *parking path S* so as to avoid a collision with an obstacle, but this does not support the Office's conclusion that "a parking path defines a zone situated between two boundaries" (Final Office Action of August 4, 2009, page 18 (emphasis added)) ("As depicted in Fig. 1, the parking path S includes left and right vehicle trajectory boundaries. The boundaries of parking path S define a zone of vehicle travel" (Advisory Action of November 3, 2009 (at continuation of 11) (emphasis added)). As explained, there is a difference between a trajectory as defined in the presently claimed subject matter (a path along which a fixed point of a vehicle can safely travel for parking) and a boundary as is depicted as to parking path S in Fig. 1 of Tanaka) that merely delimits an area occupied by the vehicle during travel, in which that area is not exceeded during travel along a parking path. These "trajectory boundaries" (as they are referred to in the Advisory Action) are not referred to anywhere in the Tanaka reference as constituting two paths (along which a fixed point of the vehicle is guided during a move) and are calculated so that the vehicle can be moved within the driving zone.

Furthermore, these "trajectory boundaries" clearly do not constitute *trajectories* as defined in the presently claimed subject matter, since they do not describe two paths along which a fixed point of the vehicle can move safely for parking. **This is because any single fixed point of the vehicle that could safely move along the path described by the left "trajectory boundary" could not also move safely along the path described by the right "trajectory boundary."** In particular, the two "trajectory boundaries" are too far apart from each other as explained above regarding dashed lines (44, 45) (of the present application) -- which delimit an area occupied by the vehicle during travel, where that area lateral to vehicle (20) is not exceeded during travel along both trajectories. It is therefore respectfully submitted that the "trajectory boundaries" of the parking path S in Fig. 1 of Tanaka therefore cannot be *trajectories* as defined in the present application.

It is respectfully submitted that the Answer and the Office Actions to date essentially ignore the proper meaning of the term "trajectories" which is to be understood in view of the specification. (See *In re Weiss*, 26 U.S.P.Q.2d 1885, 1887 (Fed. Cir. 1993) (when interpreting a claim term or phrase, one must "look to the specification for the meaning

ascribed to that term”; Board reversed) (unpublished decision); *In re Okuzawa*, 190 U.S.P.Q. 464, 466 (C.C.P.A. 1976) (“claims are not to be read in a vacuum, and limitations therein are to be interpreted in light of the specification in giving them their broadest *reasonable* interpretation”; Board reversed; emphasis in original) (citing *In re Royka*, 180 U.S.P.Q. 580, 582-83 (C.C.P.A. 1974) (claims are “not to be read in a vacuum and while it is true that they are to be given the broadest reasonable interpretation during prosecution, their terms still have to be given the meaning called for by the specification of which they form a part”; Board reversed; emphasis in original); and *In re Rohrbacher*, 128 U.S.P.Q. 117, 119 (C.C.P.A. 1960) (an “applicant is his own lexicographer and words used in his claims are to be interpreted in the sense in which they are used in the specification”; Board reversed)).

It is respectfully submitted that this is exactly the case here since contrary to the foregoing law, the Answer and the Final Office Action simply reflects its own unreasonable reading of the term “trajectories” without making a distinction with the term “boundary,” as used in the Answer and the Office Actions to date to describe the limits of the area occupied by the vehicle during travel along a parking path.

As explained above and as is disclosed in the specification, a driving zone provides a driver more flexibility and safety. For example, a zone allows a driver to “*arbitrarily* drive and steer and thus select *any trajectory* between the two delimiting trajectories.” (*Specification*, lines 17 to 19, emphasis added). In stark contrast, in Tanaka, one must follow along a parking path S. A driving zone, as provided in the context of the claimed subject matter, is not identically disclosed (nor even suggested) by the Tanaka reference.

Accordingly, claim 10 is allowable, as are its dependent claims 11 to 13, 15, 16, 19, and 20.

CLAIM 28

Independent claim 28 is to a driving aid device for parking a vehicle *in which the driving instructions indicate to the driver a driving range between two trajectories which designate two different determined routes.*

The Tanaka reference does not identically disclose (nor suggest) the above identified claim features. In particular, nothing in the Tanaka reference identically describes a driving range, as provided for in the context of the presently claimed subject matter, since at best, the Tanaka reference may merely refer to a parking path of the driver – and not a driving range.

Furthermore, and as previously explained, it is respectfully submitted that the Tanaka reference does not identically disclose (nor suggest) the claim feature of *two different determined routes*, since any review of the Tanaka reference makes plain that *two different*

determined routes are not even discussed. In Tanaka, path S (as to every time it is used with respect to Figures 1 to 3) is referred to by Tanaka as a single parking path -- and not two different determined routes, as asserted by the Answer, the Office Actions to date and the Advisory Action.

For example, as to Fig. 4, Tanaka states that “the parking path S from the current position of one’s own vehicle to the parking target point is calculated.” (Tanaka, page 4, paragraph [0058]). Notably, as explained above, the “trajectory boundaries” of Tanaka clearly do not describe two separate paths along which a vehicle can move safely for parking, but instead concern the limits of an area occupied by the vehicle during travel along a parking path S in Fig. 1 of the Tanaka reference. Accordingly, Tanaka does not identically disclose (nor suggest) two different determined routes, as provided for in the context of claim 28.

As further regards the anticipation rejections, as explained as to claim 10, it is respectfully submitted that the Office may not ignore the reasonable interpretation of the terms “driving range” and “two different determined routes,” as provided for in the context of the claimed subject matter -- and as would be understood by a person having ordinary skill in the art based on the specification. (*See In re Weiss*, 26 U.S.P.Q.2d 1885, 1887 (Fed. Cir. 1993) (when interpreting a claim term or phrase, one must “look to the specification for the meaning ascribed to that term”; Board reversed) (unpublished decision).

For at least the reasons above, claim 28 is allowable. It is therefore respectfully requested that the anticipation rejection be withdrawn.

B. THE OBVIOUSNESS REJECTIONS OF CLAIMS 14, 21, 23, 24, AND 27

Claims 14, 21, 23, 24, and 27 were rejected under 35 U.S.C. 103(a) as unpatentable over the combination of the Tanaka reference in view of U.S. Patent No. 6,919,917 (the “Janssen” reference).

To reject a claim under 35 U.S.C. § 103(a), the Office bears the initial burden of presenting a *prima facie* case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish *prima facie* obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and

not based on the application disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

Also, as clearly indicated by the Supreme Court in *KSR*, it is “important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” in the manner claimed. *See KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007). In this regard, the Supreme Court further noted that “rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Id.*, at 1396. Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim features. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

CLAIMS 14, 21, 23, 24, AND 27

Claims 14, 21, 23, 24, 26, and 27 ultimately depend from claim 10, and they are therefore allowable for essentially the same reasons as claim 10, since the secondary reference does not cure -- and is not asserted to cure -- the critical deficiencies of the primary reference as to the present application.

C. THE OBVIOUSNESS REJECTION OF CLAIM 17

Claim 17 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the Tanaka reference in view of U.S. Patent no. 6,226,592 B1 (the “Luckscheiter” reference).

CLAIM 17

Claim 17 depends from claim 10, and it is therefore allowable for essentially the same reasons as claim 10, since the secondary reference does not cure -- and is not asserted to cure -- the critical deficiencies of the primary reference as to the present application.

D. THE OBVIOUSNESS REJECTION OF CLAIM 18

Claim 18 was rejected und 35 U.S.C. § 103(a) as being unpatentable over the Tanaka reference in view of U.S. Publication No. 2003/0045973 A1 (the “Okamoto” reference).

CLAIM 18

Claim 18 depends from claim 10, and it is therefore allowable for essentially the same reasons as claim 10, since the secondary reference does not cure -- and is not asserted to cure -- the critical deficiencies of the primary reference as to the present application.

E. THE OBVIOUSNESS REJECTION OF CLAIMS 22 AND 25

Claims 22 and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Tanaka reference in view of the Janssen reference and further in view of the Luckscheiter reference.

CLAIMS 22 AND 25

Claims 22 and 25 ultimately depend from claim 10, and they are therefore allowable for essentially the same reasons as claim 10, as presented, since the secondary references do not cure -- and are not asserted to cure -- the critical deficiencies of the primary reference as to the present application.

F. THE OBVIOUSNESS REJECTION OF CLAIMS 29 AND 30

Claims 29 and 30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Tanaka reference in view of the Janssen reference, further in view of the Luckscheiter reference and in further view of the Okamoto reference.

CLAIMS 29 AND 30

Claims 29 and 30 ultimately depend from claims 28 and 10 accordingly, and they are therefore allowable for essentially the same reasons as their independent claims, since the secondary references do not cure -- and are not asserted to cure -- the critical deficiencies of the primary reference as to the present application.

As further regards each of the obviousness rejections, it is respectfully submitted that the cases of In re Fine, supra, and In re Jones, 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992), make plain that the Office's generalized assertions that it would have been obvious to modify or combine the references do not properly support a § 103 rejection. It is respectfully submitted that those cases make plain that the Answer reflects a subjective "obvious to try" standard, and therefore does not reflect the proper evidence to support an obviousness rejection based on the references relied upon. In particular, the Court in the case of In re Fine stated that:

The PTO has the burden under section 103 to establish a *prima facie* case of obviousness. It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. This it has not done. . . .

Instead, the Examiner relies on hindsight in reaching his obviousness determination. . . . One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

In re Fine, 5 U.S.P.Q.2d at 1598 to 1600 (citations omitted; italics in original; emphasis added). Likewise, the Court in the case of In re Jones stated that:

Before the PTO may combine the disclosures of two or more prior art references in order to establish *prima facie* obviousness, there must be some suggestion for doing so, found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. . . .

Conspicuously missing from this record is any evidence, other than the PTO's speculation (if it be called evidence) that one of ordinary skill . . . would have been motivated to make the modifications . . . necessary to arrive at the claimed [invention].

In re Jones, 21 U.S.P.Q.2d at 1943, 1944 (citations omitted; italics in original).

That is exactly the case here since it is believed and respectfully submitted that the Answer and the Office Actions to date offer no proper evidence, but only conclusory hindsight, reconstruction and speculation, which these cases have indicated does not constitute evidence that will support a proper obviousness finding.

Also, the Federal Circuit in the case of In re Kotzab has made plain that even if a claim concerns a “technologically simple concept” — which is not the case here — there still must be some finding as to the “specific understanding or principle within the knowledge of a skilled artisan” that would motivate a person having no knowledge of the claimed subject matter to “make the combination in the manner claimed,” stating that:

In this case, the Examiner and the Board fell into the hindsight trap. The idea of a single sensor controlling multiple valves, as opposed to multiple sensors controlling multiple valves, is a technologically simple concept. With this simple concept in mind, the Patent and Trademark Office found prior art statements that in the abstract appeared to suggest the claimed limitation. But, there was no finding as to the specific understanding or principle within the knowledge of a skilled artisan that would have motivated one

with no knowledge of Kotzab's invention to make the combination in the manner claimed. In light of our holding of the absence of a motivation to combine the teachings in Evans, we conclude that the Board did not make out a proper prima facie case of obviousness in rejecting [the] claims . . . under 35 U.S.C. Section 103(a) over Evans.

In re Kotzab, 55 U.S.P.Q.2d 1313, 1318 (Fed. Cir. 2000) (emphasis added). Here again, there have been no such findings to establish that the features discussed above of the rejected claims are met by the reference relied upon. As referred to above, any review of the reference, whether taken alone or combined, makes plain that the reference simply does not describe the features discussed above of the rejected claims.

Unsupported assertions are not evidence as to why a person having ordinary skill in the art would be motivated to modify or combine references to provide the claimed subject matter of the claims to address the problems met thereby. Accordingly, the Office must provide proper evidence of a motivation for modifying or combining the references to provide the claimed subject matter.

Thus, the proper evidence of obviousness must show why there is a suggestion as to the reference so as to provide the subject matter of the claimed subject matter and its benefits.

In short, there is no proper evidence that the reference relied upon, whether taken alone or otherwise, would provide the features of the claims discussed above. It is therefore respectfully submitted that the claims are allowable for these reasons.

As still further regards all of the obviousness rejections of the claims, it is respectfully submitted that a proper *prima facie* case has not been made in the present case for obviousness, since the Answer and the Office Actions to date never made any findings, such as, for example, regarding in any way whatsoever what a person having ordinary skill in the art would have been at the time the claimed subject matter of the present application was made. (See In re Rouffet, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998) (the “factual predicates underlying” a *prima facie* “obviousness determination include the scope and content of the prior art, the differences between the prior art and the claimed invention, and the level of ordinary skill in the art”)). It is respectfully submitted that the proper test for showing obviousness is what the “combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art”, and that the Patent Office must provide particular findings in this regard — the evidence for which does not include “broad conclusory statements standing

alone”. (See *In re Kotzab*, 55 U.S.P.Q. 2d 1313, 1317 (Fed. Cir. 2000) (citing *In re Dembiczak*, 50 U.S.P.Q.2d 1614, 1618 (Fed. Cir. 1999) (obviousness rejections reversed where no findings were made “concerning the identification of the relevant art”, the “level of ordinary skill in the art” or “the nature of the problem to be solved”))). It is respectfully submitted that there has been no proper showings by the Answer, the Office Actions to date or by the Advisory Action.

In fact, the present lack of any of the required factual findings forces both Appellants and this Appeals Board to resort to unwarranted speculation to ascertain exactly what facts underly the present obviousness rejections. The law mandates that the allocation of the proof burdens requires that the Patent Office provide the factual basis for rejecting a patent application under 35 U.S.C. § 103. (See *In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984) (citing *In re Warner*, 379 F.2d 1011, 1016, 154 U.S.P.Q. 173, 177 (C.C.P.A. 1967))). In short, the Examiner bears the initial burden of presenting a proper prima facie unpatentability case — which has not been met in the present case. (See *In re Oetiker*, 977 F.2d 1443, 1445, 24, U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992)).

Accordingly, all of pending claims 10 to 30 are allowable.

CONCLUSION

In view of the above, it is respectfully requested that the rejections of the finally rejected claims 10 to 30 be reversed, and that these claims be allowed as presented.

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Respectfully submitted,

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